

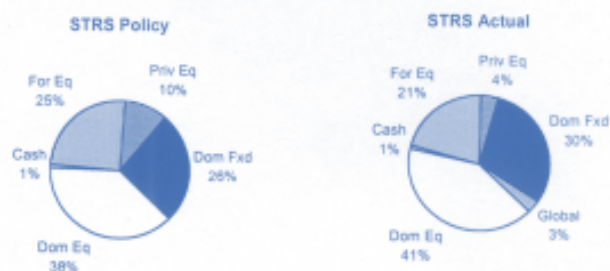
## Investment Consultant's Report



The STRS investment portfolio grew by over \$13 billion during the past year reaching a value of over \$88 billion on June 30, 1998. As highlighted below, the STRS portfolio is broadly diversified, holding investments ranging from publicly-traded bonds to privately-held partnerships. Clearly, the scale and breadth of investments make the management and oversight of these assets highly complex. In light of these factors, STRS has been effective in using its resources in a cost-efficient manner to ensure that benefits continue to flow to STRS participants.

## Investment Allocation

The most critical factor influencing overall investment performance is the allocation of the STRS portfolio across major asset classes. The fiscal year-end report reflects asset allocation guidelines adopted by STRS on July 1, 1997 (see left chart). The portfolio's actual allocation is modestly different from policy. Private equity and foreign equity are underweighted while domestic debt, global investments and domestic equity are overweighted (see right chart). STRS' asset allocation guidelines adopted on July 1, 1997 do not include the global asset class. These assets (\$2.6 billion) will be redeployed within Board adopted guidelines.

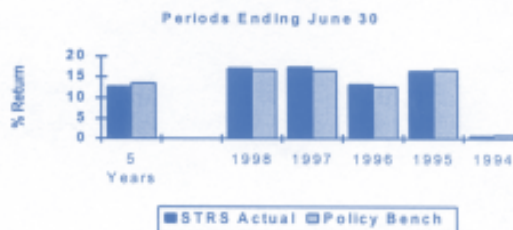


## Investment Results

Over the last year, the STRS investment portfolio produced an overall return of 17.0% (top bar chart). This result trailed the STRS policy benchmark by 50 basis points.<sup>1</sup> As the bar chart shows, the fixed income portfolio added value relative to its benchmark while the equities portfolio trailed its benchmark over the latest year.



During the last three years, STRS' portfolio generated a 15.9% return versus 16.2% for the policy benchmark. Over the last five years, the STRS investment portfolio produced an average annual return of 12.7%, lagging the policy benchmark by 80 basis points (bottom chart). However, if examined on a fiscal year basis, STRS' performance has exceeded its benchmark in three of the last five years. This result is due, in part, to STRS eliminating deviations between actual asset class weightings and policy weightings.<sup>2</sup>



*Pension Consulting Alliance, Inc.*

<sup>1</sup> The policy benchmark consists of passive managed asset class portfolios weighted by STRS' policy allocations. The difference between actual results and the benchmark are due to two factors: i) deviations from policy and ii) active decisions on the part of STRS and its investment managers.

<sup>2</sup> STRS' investment performance is calculated using a monthly internal rate of return with day-weighted cash flows. Periods longer than one month are geometrically linked. This method of return calculation complies with AIMR performance presentation standards.



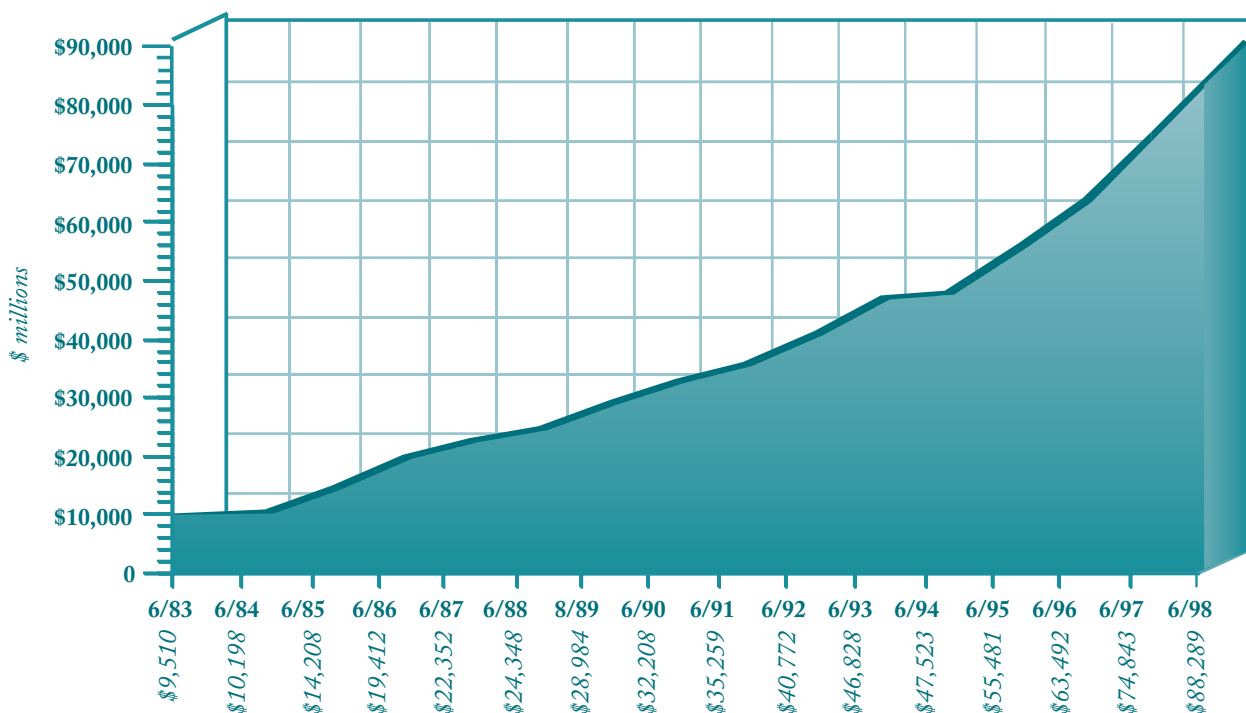
# Investments

The market value of the STRS investment portfolio reached more than \$88 billion on June 30, 1998. This figure represents an increase of 18 percent and a dollar gain of more than \$13 billion in the last year. As was true last year, the domestic equity portfolio provided the majority of the gain, returning an increase of 28 percent. The fixed income portfolio clearly added value relative to its benchmark over the last year, returning a gain of 15 percent. That portfolio segment represented approximately 30 percent of the total investment portfolio and a dollar value of \$26 billion at the end of the fiscal year. Asset allocation remains the most important factor in investment performance. At the end of the fiscal year, the portfolio's allocation across

major asset classes was as follows: Equity-Domestic and International 62%; Fixed Income-Domestic 30%; Private Equity 4%; Global Asset Allocators 3% and Cash 1%.

STRS continues to stress long-term performance is more important to members than the transitory changes that may temporarily affect markets and countries. STRS continues to execute its policies, strategies and procedures for the long term.

Chart A, below, illustrates the correctness of the long-term approach by showing the growth in total investment portfolio, excluding securities lending collateral, from June 30, 1983 through June 30, 1998.

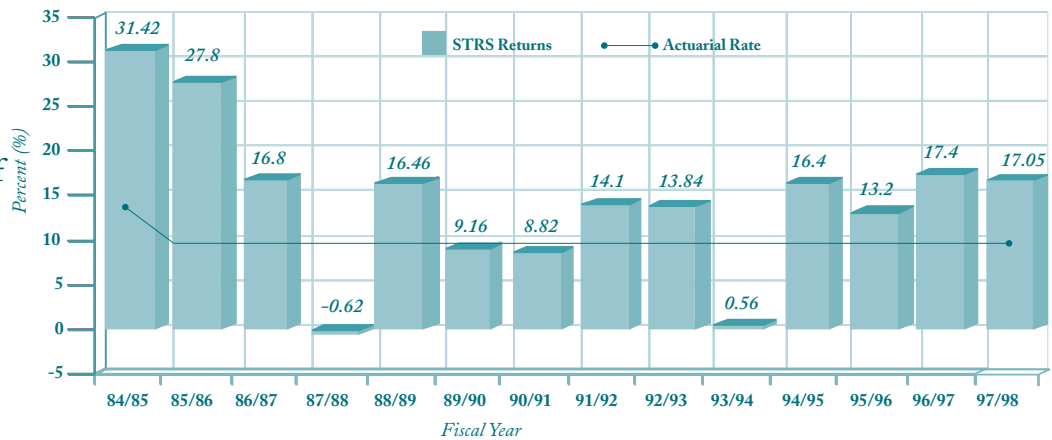


**Chart A: Growth in total investments**

## STATE TEACHERS' RETIREMENT SYSTEM

Chart B contrasts STRS' returns against the actuarial rate, which is the long-term assumed rate of return for the fund. Chart C shows the performance returns for all of the major asset classes in the STRS portfolio and the benchmark indices. The calculations were prepared using a monthly internal rate of return with day-weighted cash flows. Periods longer than one month are geometrically linked providing a time-weighted market value rate of return. This method of return

calculation complies with Association for Investment Management and Research performance presentation standards. These returns are displayed over 1-, 3-, 5- and 10-year periods.



**CHART B: Growth in STRS' returns**

Portfolio Type/ Associated Indices	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Total Fund	17.05%	15.87%	12.74%	12.59%
Domestic Equity	27.77%	27.12%	20.63%	17.33%
RUSSELL 3000	28.81%	28.45%	21.74%	17.91%
WILSHIRE 5000	28.86%	28.13%	21.56%	17.61%
International Equity	0.75%	11.32%	10.57%	N/A
MSCI Europe, Australia, & Far East	6.10%	10.69%	10.03%	N/A
MSCI Emerging Market	-39.08%	-9.33%	0.44%	N/A
Fixed Income	15.06%	9.26%	8.19%	10.40%
Salomon Large Pension Fund	13.76%	9.03%	7.89%	10.28%
Global Asset Allocators	13.22%	14.55%	12.05%	N/A
MSCI World	17.03%	19.23%	15.64%	N/A
Salomon World Government Bond	4.32%	2.84%	6.33%	N/A
Real Estate	19.65%	13.78%	10.34%	4.86%
Institutional Property Consultants	15.07%	10.90%	8.58%	4.90%
Alternative Investments	36.67%	32.83%	25.73%	N/A
Consumer Price Index + 12% per annum	13.70%	14.24%	14.45%	N/A
Liquidity	6.19%	6.04%	5.58%	6.35%
Salomon 3-Month Treasury Bill	5.23%	5.31%	4.92%	5.55%

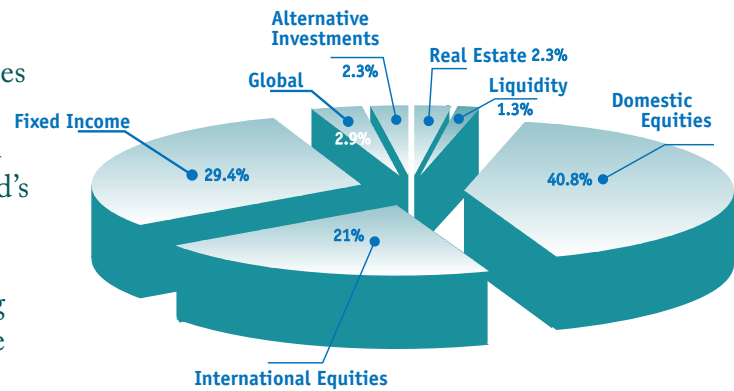
**CHART C: Performance returns for major asset categories**

*\*All the performance measurement calculations are conducted in accordance with the presentation standards of the Association for Investment Management and Research.*



## Objectives

The objectives of the investment management plan have not changed, but there has been some refinement. Over the last year, there has been an increased focus on active management, including the recent hiring of several enhanced index managers. The newly adopted asset allocation guidelines do not include the tactical asset allocation category. This asset category was eliminated as a result of the Teachers' Retirement Board's periodic review and decision that certain incremental adjustments were appropriate. STRS continues its commitment to bringing the actual asset allocation percentages of the portfolio closer to the policy allocation and its commitment to the domestic and international segment, while reducing the commitment to the fixed income sector.



**Asset allocation (6/30/98)**

*Total investment portfolio of \$88.3 billion*

## Fixed Income

Although STRS has persisted in its goal of gradually reducing the portfolio's overweighting in fixed income, it is important to note that this area of the portfolio performed exceedingly well over the most recent fiscal year. Last year, the STRS fixed income portfolio achieved a return of more than 15 percent compared to the Large Pension Fund Index (performance benchmark) return of 14 percent. As of June 30, 1998, the market value of the fixed income asset class was \$26 billion. This dollar amount translates into 30 percent of the total investment portfolio and is a reduction from the 34 percent portion it occupied last year at this time. Interest rates fell more than 1 percent over the last 12 months. These results provide positive proof of the importance of asset allocation, diversification and the consideration of prudent levels of risk. Over the last five years, the annualized total rate of return has measured more than 8 percent. This return has outperformed the LPF Index return by 30 basis points. The fixed income portfolio is invested in securities with the highest

quality ratings. Nearly 80 percent is invested in U.S. government or U.S. government-guaranteed securities. This ensures both liquidity and safety and greatly reduces the risk of default.

## Liquidity

The cash or liquid asset segment of the portfolio closed the fiscal year at \$1 billion or just about 1 percent of the total investment portfolio. STRS' goal is to be fully invested at all times, as long as benefit payments and investment funding requirements are considered. The liquid asset portfolio is also heavily invested in the highest quality U.S. government and agency securities. The remainder of this portfolio is invested in investment-grade corporate securities and commercial paper.

## External Equity Management

STRS' public equity portfolio remains its most important investment vehicle for growth. In fiscal year 1997–1998, the domestic equity portfolio generated nearly a

## STATE TEACHERS' RETIREMENT SYSTEM

Issue	Maturity Date	Interest Rate	Par	Market Value	Average Cost	Unrealized Gain/(Loss)
US TREASURY	15-Nov-2015	9.88%	994,000,000	1,447,820,640	1,299,995,917	147,824,723
US TREASURY	15-Feb-2019	8.88%	915,000,000	1,260,266,100	907,272,993	352,993,107
US TREASURY	15-Feb-2016	9.25%	845,000,000	1,175,344,300	1,001,088,744	174,255,556
US TREASURY	15-May-2016	7.25%	950,700,000	1,113,802,092	994,739,086	119,063,006
US TREASURY	15-Feb-2020	8.50%	780,000,000	1,045,441,800	927,765,654	117,676,146
US TREASURY	15-Aug-2017	8.88%	715,000,000	974,745,200	769,072,744	205,672,456
US TREASURY	15-Nov-2016	7.50%	607,000,000	728,685,290	601,080,007	127,605,283
US TREASURY	15-Aug-2013	12.00%	472,375,000	700,371,518	628,953,592	71,417,926
US TREASURY	15-May-2017	8.75%	475,000,000	639,692,000	472,957,195	166,734,805
US TREASURY	15-Aug-2019	8.13%	448,000,000	578,197,760	459,702,261	118,495,499

**CHART D: Largest fixed income holdings as of June 30, 1998** (STRS maintains a complete list of portfolio holdings.)

28 percent total rate of return. International equities returned less than 1 percent over this same time period. On a combined basis, the equity portfolio returned nearly 18 percent for this past year. This asset class had a market value of more than \$54 billion on June 30, 1998, and represented 62 percent of the total portfolio. As was true last year, the domestic equity portfolio outperformed the international segment. Over the last five years, the equity component has delivered nearly a 17 percent return. STRS continued to allocate more of the fund's assets to the equity segment over this past year and was rewarded in its belief that a higher allocation to this area, especially domestic equities, produces higher returns over the long term.

Incremental changes have been made in this segment of the portfolio as well. STRS will be increasing its commitment to the active style of equity management, effectively doubling both its dollar amount and the number of managers employed in this sector. Active management will continue to be done by external managers, while the passive sector will have a combination of internal and external management.

### Internal Equity Management

During 1998, STRS augmented its investment strategies in the passively managed style of equity management by establishing an internally managed indexed portfolio. This unit was established as part of STRS' efforts to reduce the management fees associated with the portfolio. The portfolio did not begin operation until April 1, 1998, so it is somewhat early to compare results at this stage.





## Alternative Investments

This fiscal year, STRS made additional commitments of nearly \$1 billion in this segment of the portfolio. Total commitments in this asset class now amount to \$4 billion or nearly 5 percent of the total portfolio. There are now 71 partnerships and two co-investments in the alternative investments portfolio. At the end of the fiscal year, the total market value was nearly \$2 billion, representing about 2 percent of the total STRS portfolio. STRS continued to increase its commitment in this area as a result of the allocation review it completed at the end of June, 1997. The alternative investment asset class has achieved annualized returns of 37, 33 and 26 percent, for the 1-, 3- and 5-year periods respectively.

## Real Estate

Over the last fiscal year, STRS' portfolio of real estate assets reached \$2 billion. This dollar amount is represented by 41 directly owned properties and three privately owned partnerships. The real estate asset class represents slightly more than 2 percent of the

total portfolio. The direct property portfolio is diversified by property type and geographical location. The two largest components of this sector are office and industrial buildings, located in the western region of the United States. STRS' real estate portfolio has achieved annualized returns of 20, 14 and 10 percent, for the 1-, 3- and 5-year periods respectively.

## Credit Enhancement

STRS has entered into agreements with a number of issuers of non-taxable debt to guarantee the payment of principal and interest for specified default events. To reduce risk while increasing incremental return, STRS is paid a fee over the term of the agreement. The majority of the transactions are supported by collateral or stand-by letters of credit from banks for repayment. As of June 30, 1998, the credit enhancement program had commitments of approximately \$489 million and fee income earned over the year was more than \$1 million.

Issue	Shares	Market Value	Average Cost	Unrealized Gain/(Loss)
GENERAL ELEC CO	9,053,806	823,896,346	215,386,273	608,510,073
MICROSOFT CORP	6,820,865	739,211,244	173,111,047	566,100,198
COCA COLA CO	6,862,412	586,736,226	151,602,543	435,133,683
EXXON CORP	6,810,495	485,673,425	202,898,970	282,774,455
MERCK + CO INC	3,321,251	444,217,321	117,148,215	327,069,107
PFIZER INC	3,610,227	392,386,547	103,274,730	289,111,817
WAL MART STORES INC	6,257,056	380,116,152	98,387,566	281,728,586
INTEL CORP	4,686,015	347,350,862	98,307,871	249,042,991
PROCTER + GAMBLE CO	3,722,019	338,936,355	96,344,159	242,592,196
ROYAL DUTCH PETE CO	5,949,622	326,113,656	197,252,393	128,861,263

### CHART E: Largest equity holdings as of June 30, 1998

(STRS maintains a complete list of portfolio holdings)

## Securities Lending

This year marks the 10-year anniversary of the securities lending program at STRS. Over the last fiscal year, STRS earned \$49 million from this activity. Since inception, the program has earned nearly \$240 million. The amount of income earned in this program is based upon the types of securities held, the volume of securities loaned and the level of risk taken in the reinvestment of the cash taken as collateral. In keeping with STRS' goal of increasing the efficiency and improving the cost structure of the portfolio, a portion of this program was managed internally for the first time in the 1997-98 fiscal year.

## Home Loan Program

STRS began making 15-and 30-year fixed interest rate conventional home loans to members in 1986 as a result of the Dave Elder State Teachers' Retirement System Home Loan Act. The purpose of this legislation was to provide STRS with a mortgage-backed investment opportunity as well as an additional source of home financing for STRS members. Over the last fiscal year, the home loan program funded \$43 million in real estate loans. The last year's activity brings the total loans purchased to nearly \$2.4 billion. Norwest Mortgage and the Bank of America continue to be the primary lenders for STRS.

## Corporate Governance

During the 1997-98 fiscal year, STRS voted on a variety of proxy issues including financial, corporate governance and social issues. More than 7,500 proxy issues were reviewed and analyzed on the 2,889 companies owned by STRS. As in previous years, STRS reviewed its portfolio of domestic and Canadian stocks and screened for relative underperformance. In the past year, a record number of mergers and acquisitions continued, as the generally rising market increased the value of the acquirer's

stock and made combinations attractive. The major proxy issues are summarized below:

### 1. Election of Directors

STRS generally votes in favor of directors unless there is a compelling reason not to cast a positive vote.

*Number Voted: 2,656*

*For: 1,888*

*Against: 768*

### 2. Auditors

This issue relating to hiring auditors was voted more than 1,600 times; all these issues received a favorable vote.

### 3. Compensation Plans

These are issues relating to the incentive plans offered to the top employees of corporations. STRS votes in favor of these plans as long as the incentive offered aligns shareholder interest with that of the management.

*Number Voted: 1,176*

*For: 454*

*Against: 722*

### 4. Corporate Actions/ Corporate Governance Issues

These are issues relating to mergers, acquisitions, stock issuance, stock splits and reincorporation. STRS generally votes in favor of these proposals unless there is a compelling reason not to cast a positive vote.

*Number Voted : 592*

*For: 153*

*Against: 439*



### 5. Shareholder Proposed Issues Social and Financial

These are shareholder-submitted issues and are reviewed generally on a case-by-case basis. Previously established policy and the expressed philosophy of the Teachers' Retirement Board are also important considerations.

*Number Voted: 156*

*For: 109*

*Against: 47*

### 6. Miscellaneous Issues from Both Shareholders and Management

These are reviewed on a case-by-case basis.

*Number Voted: 536*

*For: 416*

*Against: 120*

Portfolio Type	30-Jun-97		30-Jun-98			Net Market Change
	Book Value	Market Value	Book Value	Market Value	% of Market Value	
Domestic Equity	13,536	26,842	16,498	36,058	40.84%	9,216
International Equity	13,350	15,798	16,498	18,511	20.97%	2,713
Fixed Income	24,365	25,385	23,592	25,970	29.41%	585
Global Asset Allocations	1,976	2,283	2,172	2,586	2.93%	303
Alternative Investments	1,158	1,406	1,526	1,986	2.25%	580
Real Estate	2,116	1,945	1,934	2,062	2.34%	117
Liquidity	1,184	1,184	1,116	1,116	1.26%	(68)
Total Portfolio	57,685	74,843	63,336	88,289	100.00%	13,446
Plus: Securities Lending Collateral		18,648		16,996		
Less Accruals		311		376		
Plan Net Assets-Investments		93,180		104,909		

**CHART F: Investment summary for the year ended June 30, 1998** (in millions)

	Assets Under Management	Fees	Basis Points
Investment Managers' Fees:			
Domestic Equity	\$36,058,515	\$3,392	0.94
International Equity Managers	18,511,419	15,293	8.26
Global Asset Allocation	2,586,153	7,432	28.74
Real Estate	2,061,521	10,373	50.32
Total Investment Managers' Fees	\$59,217,608	\$36,490	6.16

**CHART G: Schedule of fees July 1, 1997 through June 30, 1998** (in thousands)



# STATE TEACHERS' RETIREMENT SYSTEM

Broker Name	Commission	Shares	Commission per share
<b>Domestic Equity Transactions</b>			
INVESTMENT TECHNOLOGY GROUP INC.	611,351	22,711,163	0.027
GOLDMAN SACHS	429,648	18,476,291	0.023
CAPITAL INSTITUTIONAL SERVICES	403,420	6,741,205	0.060
INSTINET	266,204	13,130,670	0.020
MORGAN STANLEY + CO	193,130	4,255,666	0.045
CANTOR FITZGERALD + CO., INC.	192,653	3,982,467	0.048
BEAR STEARNS SECURITIES CORP	190,413	3,626,865	0.053
DONALDSON, LUFKIN + JENRETTE SECS	190,330	3,309,575	0.058
SMITH BARNEY INC.	188,659	4,401,856	0.043
LEWCO SECURITIES	180,328	3,125,798	0.058
OTHER DOMESTIC	3,109,132	66,054,509	0.047
Total Domestic	5,955,267	149,816,065	0.040
<b>International Equity Transactions</b>			
MORGAN STANLEY + CO	2,475,008	412,097,819	0.006
MERRILL LYNCH	1,943,630	124,394,910	0.016
GENA SECURITIES	1,234,579	543,166,445	0.002
HALL INTERNATIONAL PARTNERS	1,066,466	897,231,788	0.001
JAMES CAPEL + CO LTD	656,131	44,766,994	0.015
SALOMAN BROTHERS INC.	537,989	167,547,312	0.003
GOLDMAN SACHS	518,226	63,170,474	0.008
SWISS BANK CORP	449,430	19,179,135	0.023
UBS LIMITED	424,308	74,213,487	0.006
DRESDNER BANK	378,749	15,637,868	0.024
OTHER INTERNATIONAL	8,233,205	2,644,183,120	0.003
Total International	17,917,721	5,005,589,352	0.004

**Chart H: Broker commissions** (July 1, 1997 through June 30, 1998)

## Cash Balance Fund

Cash Balance Fund contributions are invested at the direction of the Teachers' Retirement Board in internally pooled portfolios of the Teachers' Retirement Fund. The current allocation of these contributions calls for 60 percent to the S&P500 portfolio and 40 percent to the government index portfolio. The CBF has ownership of units of these pooled portfolios that reflect market fluctuations of underlying securities on a daily basis. Income and expenses are distributed to each pooled portfolio on a pro-rata basis determined by the number of units owned as a percentage of the total units of the portfolio.

Contributions to the CBF began on February 1, 1997. The investment value of those contributions as of June 30, 1998, was \$1.6 million. For both portfolios, the combined total return for the past year was 26.8 percent. Since inception these portfolios have achieved a return of 26.2 percent. These returns compare favorably with the one-year returns achieved on both benchmarks, the S&P500 and the Salomon Brothers Large Pension Fund-Treasury, at 30.3 percent and 17.5 percent respectively.